## University of California, Berkeley P 0 0 9 ects F isca Year 2 01/2 2



## Sponsored Projects Annual Report, Fiscal Year 2014 Table of Contents

University of California, Berkeley / Sponsored Projects

Overview	3
Proposal and Award Overview	3
Proposals and Awards by Campus Control Unit	6
Proposals by Campus Control Unit	7
Funding by Campus Control Unit	8
Awards by Funding Source	
Overview - All Sponsors	9
Award Highlight	9
Federal Agencies	11
Award Highlight	12
Nonfederal Agencies	13
Largest Awards, Fiscal Year 2014	14
Award Highlights	15

## University of California, Berkeley

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# University of California, Berkeley / Sponsored Projects Overview

The **University of California, Berkeley** is one of the world's leading universities in research, teaching, and public service, with an enrollment of nearly 26,000 undergraduates and over 10,000 graduate students. The campus employs 1,620 full-time and 616 part-time faculty in 130 academic departments and more than 80 interdisciplinary research units. UC Berkeley is divided into 14 colleges and schools, most of which are subdivided into departments. The campus offers over 8,000 undergraduate and graduate courses in 350 degree programs, and typically produces more Ph.D.s annually than any other U.S. university.

The Sponsored Projects Office (SPO) at UC Berkeley is responsible for endorsing and authorizing proposals to and interpreting, negotiating, and accepting contracts and grants for projects funded by federal and state agencies, foundations, and other public and private sources. SPO prepares and negotiates all subawards for collaborative research. SPO is part of the Research Administration and Compliance Office (RAC), under the Vice Chancellor for Research.

Berkeley Coeus, managed by RAC, has been the campus research contract and grant system of record since 1998. A project is underway to replace Coeus with the next generation of the software, the community-source Kuali Coeus research administration system. Berkeley Phoebe Proposal Development is the first in a series of modules based on Kuali Coeus. Phoebe Proposal Development supports fully online proposal approvals and routing from departments and units to SPO and the Industry Alliances Office. RAC has integrated Phoebe with Coeus to feed completed proposal information directly into Coeus, and is in the process of migrating all Coeus data and functionality into Phoebe so that Coeus can be retired.

# **Proposal and Award Overview**



#### Ten-Year Comparison of Funding Requested and Funding Received, FY 2005-2014 (dollars in millions)



# **Proposal and Award Overview**



Ten-Year Comparison of Project and Budget Period Funding, FY 2005-2014 (dollars in millions)

Project period funding includes all funding anticipated for a project, reporting in the fiscal year of its begin date. Budget period funding reports each budget period for a project in the fiscal year of its begin date. Both project and budget period funding showed modest increases in fiscal year 2014, at 3.5% and 4.5% respectively. 2010 and 2011 data reflects increased federal funding under the American Recovery and Reinvestment Act of 2009.



Ten-Year Comparison of Number of New Awards Received, FY 2005-2014



# **Proposal and Award Overview**



### Fiscal Year 2014 Funding Summary by Activity Type (\$738.5 million total - dollars in millions)

Activity type "Other" primarily includes funding transferred from the Lawrence Berkeley National Laboratory for administrative purposes, along with projects that span multiple activities or do not cleanly fit into the five other categories.



#### Ten-Year Funding Summary by Activity Type, FY 2005-2014 (\$6.68 billion total - dollars in millions)



## **Sponsored Projects Annual Report 2014**

# **Proposals and Awards by Campus Control Unit**

UC Berkeley colleges, schools, and divisions include the Colleges of Chemistry, Engineering, Natural Resources, and Environmental Design, as well as Optometry, Law, Journalism, Public Policy, Public Health, Education, Business, Social Welfare, and others.

Organized Research Units (ORUs) report to the Vice Chancellor for Research and span many disciplines. These institutes, centers, and departments exist primarily to conduct research, and include the Space Sciences Laboratory, the Institute of Transportation Studies, the Berkeley Seismological Laboratory, and many others.

The College of Letters and Science, or L&S, includes Biological, Physical, Social Science, and Arts and Humanities Divisions.

In fiscal year 2013 the Sponsored Projects Office implemented Phoebe, an online proposal development and workflow tool based on the community-source Kuali Coeus application. Phoebe has been rolled out gradually to the campus over the last two years. In fiscal year 2014, more than 2,800 of the 3,492 proposals submitted originated fully online in Phoebe.





# **Proposals by Campus Control Unit**



Fiscal Year 2014 Number of Proposals Submitted by Control Unit (3,492 total)

Ten-Year Number of Proposals Submitted by by Control Unit, FY 2005-2014 (34,852 total)





## Funding by Campus Control Unit



#### Fiscal Year 2014 Funding Summary by Control Unit (\$738.5 million total - dollars in millions)

Ten-Year Funding Summary by Control Unit, FY 2005-2014 (\$6.68 billion total - dollars in millions)





# Awards by Funding Source Overview - All Sponsors

In fiscal year 2014, federal funding increased by 45% over last year's total of \$335 million, and again made up the largest portion of total funding received with 66% of the total. This is in large part due to receipt of \$132.6 million from the National Aeronautics and Space Administration to launch and operate the Ionospheric Connection Explorer (ICON), a project managed in the Space Sciences Laboratory and involving five other universities. Without that award, federal funding increased by 5% over last year's total.

Funding from nonprofit organizations in fiscal year 2014, including foundations, charities, research institutes, and institutions of higher education, decreased by nearly \$100 million from fiscal year 2013's unusually high total of \$226.7 million.

State of California funding remained essentially flat in fiscal year 2014, at \$73.7 million. Funding from other governmental sources more than doubled, totaling \$10.4 million. Industry project period funding declined nearly 47% this year at \$23 million, down from the \$44 million received last year.

# Award Highlight

## ICON: Where Earth's Weather and Space Weather Meet

An award of over \$139.5 million total from NASA to the Space Sciences Laboratory supports development of the Ionospheric Connection Explorer (ICON). NASA has selected ICON to be the next Heliophysics Explorer satellite mission. The ICON mission, lead by the University of California, Berkeley, will provide NASA's Heliophysics division with a powerful new capability to determine the conditions in space modified by weather on the planet, and to understand the way space weather events grow to envelop regions of our planet with dense ionospheric plasma.

ICON will probe the extreme variability of Earth's ionosphere with in-situ and remote-sensing instruments. Fluctuations in the ionosphere interfere with signals from communications and global positioning satellites, which can have an economic impact on the nation.

## http://icon.ssl.berkeley.edu/





## **Overview - All Sponsors**



Fiscal Year 2014 Funding Summary - All Sponsors (\$738.5 million total - dollars in millions)

Ten-Year Funding Summary - All Sponsors, FY 2005-2014 (\$6.68 billion total - dollars in millions)





## **Federal Agencies**



#### Fiscal Year 2014 Funding Summary - Federal Sponsors (\$486.3 million total - dollars in millions)

The National Aeronautics and Space Administration was the largest source of federal funds in fiscal year 2014, awarding almost seven times the amount received in fiscal year 2013. Funding from the Department of Health and Human Services increased by 33%, totaling \$123.1 million. The National Science Foundation awarded \$98.6 million, up 7% from last year's total of \$92.1 million. Together, these two agencies comprise 45% of federal funding and 31% of total funding in fiscal year 2014.

Ten-Year Funding Summary - Federal Sponsors, FY 2005-2014 (\$3.64 billion total - dollars in millions)





## **Federal Agencies**



Ten-Year Funding Summary for Top-Five Federal Sponsors, FY 2005-2014 (dollars in millions)

## **Award Highlight**

## UCCONNECT: New Center for Research on California's High-Priority Transport Needs

The University of California Center on Economic Competitiveness in Transportation (UCCONNECT) was established through funding of over \$5 million from the U.S. Department of Transportation and additional funding from Caltrans. The UCCONNECT mission is to serve as the new University Transportation Center for federal region 9, dedicated to enhancing economic competitiveness by improving mobility and maximizing the performance of surface transportation systems, enhancing multi-modal transport for California and the region. UCCONNECT is a consortium of five UC campuses (Berkeley, Irvine, Los Angeles, Riverside, and Santa Barbara) and Cal Poly, Pomona.

### http://ucconnect.berkeley.edu/





# **Nonfederal Agencies**



Fiscal Year 2014 Funding Summary - Nonfederal Sponsors (\$252 million total - dollars in millions)

> Ten-Year Funding Summary - Nonfederal Sponsors, FY 2005-2014 (\$3.04 billion total - dollars in millions)





## Largest Awards, Fiscal Year 2014

Thomas Immel, Space Sciences Laboratory, "The Ionospheric CONnection Explorer (ICON) Phases B-F," National Aeronautics and Space Administration, \$132,285,047 (amount received in fiscal year 2014)

Jeffrey L. Edleson, Social Welfare, "Title IV-E Social Work Training Program," California Department of Social Services, \$32,664,474

Andrew J. Szeri, Graduate Division Dean, "Fee Remission Graduate Student Program," Lawrence Berkeley National Laboratory, \$25,047,825

Saul Perlmutter, Data Science Institute, "Moore/Sloan Data Science Environment," Gordon and Betty Moore Foundation, \$10,000,000

Austin J. Roorda, School of Optometry, "Advanced Technology to Study Visual Function on a Cellular Scale," National Eye Institute, \$6,022,413

Omar Yaghi, Chemistry Department, "KACST- UC Berkeley Collaboration on Nanomaterials for Clean Energy Application," King Abdulaziz City for Science and Technology, \$6,000,000

Jay Keasling, California Institute for Quantitative Biosciences, "Synthetic Biology of Yeast," National Science Foundation, \$5,204,077

Michael J. Cassidy, UC Transportation Center, 'University of California Center on Economic Competitiveness in Transportation," U.S. Department of Transportation, \$5,163,200

William E. Dietrich, Research Field Stations and Nature Reserves, "The Eel River Critical Zone Observatory: Exploring How the Critical Zone will Mediate Watershed Currencies and Ecosystem Response in a Changing Environment," National Science Foundation, \$4,899,996

S. Katharine Hammond, Environmental Health Sciences, "UC Berkeley/Stanford Children's Environmental Health Center," Environmental Protection Agency, \$4,765,843

S. Katharine Hammond, Environmental Health Sciences, "UC Berkeley/Stanford Children's Environmental Health Center," National Institute of Environmental Health Sciences, \$4,006,694

Steven Boggs, Space Sciences Laboratory, "Science Flight Program of the Nuclear Compton Telescope," National Aeronautics and Space Administration, \$3,846,966

Kristine Madsen, School of Public Health, "RCT of BMI Screening: Effects on Obesity, Disparities, and Body Satisfaction," National Heart, Lung, and Blood Institute, \$3,725,419

Richard H. Kramer, Optometry Department, "CORE Grant for Vision Research," National Eye Institute, \$3,714,640

Claude S. Fischer, Institute of Business and Economic Research, "Understanding How Personal Networks Change," National Institute on Aging, \$3,432,240

Mark D'Esposito , Helen Wills Neuroscience Institute, "Dopamine and Frontostriatal Function," National Institute on Drug Abuse, \$3,378,264

James Hurley, California Institute for Quantitative Biosciences, "Biochemical and Structural Mechanisms of HIV-1 Budding and Release," National Institute of Allergy and Infectious Diseases, \$3,243,229

Lawrence Cohen, Center for South Asian Studies, "BULPIP-AIPS Urdu Training Program," U.S. Department of State, \$3,094,886

Peidong Yang, Chemistry Department, "BASF West Coast Innovation Center at University of California Berkeley," BASF Corporation, \$3,000,000



## **Award Highlights**

# Berkeley Institute for Data Science: Accelerating the Pace of Scientific Discovery

The Berkeley Institute for Data Science (BIDS) was founded in fall 2013 to build on existing campus strengths with a multidisciplinary emphasis that aims to facilitate and enhance the development and application of cutting-edge data science techniques in the biological, physical, social and engineering sciences. The Institute's initial support is provided by a five-year \$12.5 million grant from the Gordon and Betty Moore Foundation and the Alfred P. Sloan Foundation, together with significant support provided by UC Berkeley. The Moore/Sloan partnership, which also includes New York University and the University of Washington, will spur collaborations within and across the three campuses and other partners pursuing similar data-intensive science goals.

BIDS brings together researchers across disciplines and enhances career paths for data scientists through a number of newly created Data Science Fellows positions, graduate student fellowships, boot-camps, special classes, and conferences of interest to the academic community and general public.

http://bids.berkeley.edu/

## Eel River Critical Zone Observatory: Exploring Watershed Currencies and Ecosystem Response in a Changing Enviroment

UC Berkeley scientists will receive \$4,900,000 over the next five years from the National Science Foundation to study the nearly 10,000 square kilometer Eel River watershed in Northern California and how its vegetation, geology and topography affect water flow all the way to the Pacific Ocean. What the researchers uncover will help improve global climate models and modeling tools that can be used by state or regional decision makers to guide planning. Their discoveries may eventually allow scientists to predict the impact of changing climate and land use on future droughts, floods, and supplies of water for drinking and agriculture.

The Eel River CZO core team spans four UC Berkeley departments and has expertise in geomicrobiology and biogeochemistry, low temperature geochemistry, microbial ecology, salmonid ecology, food web ecology, geomorphology and hydrology, tree physiology, ecohydrology theory and observation, and climate modeling.

### http://criticalzone.org/eel/





